I CLAIM

- 1. A communications system comprising a common device and a plurality of higher layer devices connected via a bus for the communication of data traffic between the common device and the higher layer devices in which the bus comprises lines for carrying data and control signals; in which the data traffic comprises data in ATM form and data in AAL2 form; in which the devices comprise discrimination means for discriminating between the two forms of data traffic.
- 2. The communications system of Claim 1 in which the data in AAL2 form comprises an AAL2 mini-cell associated with a means of identification of the source or destination of the mini-cell.
- 3. The communications system of Claim 2 in which the means of identification comprises an ATM header.
- 4. The communications system of Claim 3 in which the data in AAL2 form is associated with an ATM virtual path (VP) and an ATM virtual channel (VC), in which the ATM header comprises a virtual path identifier (VPI) field and a virtual channel identifier (VCI) field; the VPI and VCI fields for use for determining the associated VP and VC respectively.
- 5. The communications system of Claim 2 in which the means of identification comprises

a pulse code modulation (PCM) circuit identifier.

- 6. The communications system of Claim 2 in which the means of identification comprises the identity of a synchronous digital hierarchy (SDH) virtual container.
- 7. The communications system of Claim 1 in which the common device comprises an ATM physical layer (PHY) and the plurality of higher layer devices comprise an ATM layer and an AAL2 layer.
- 8. The communications system of Claim/1 in which the discrimination means comprises means for using a control signal from the bus for discriminating between the two forms of data traffic.
- 9. The communications system of Claim 8 in which the control signal is the start of cell (SOC) signal.
- 10. The communications system of Claim 9 in which the discrimination means comprise means to discriminate between the two forms of traffic depending on the number of clock cycles the SOC signal is active.
- 11. The communications system of Claim 8 in which the control signal is an additional signal.

- 12. The communications system of Claim 1 in which the discrimination means comprises means for using a field of the data traffic for discriminating between the two forms of data traffic.
- 13. The communications system of Claim 12 in which the data traffic comprises a user defined field (UDF) in which the field for use for discriminating is the UDF.
- 14. The communications system of Claim 12 in which the data in AAL2 form comprises an AAL2 mini-cell and the data in ATM form comprises an ATM cell, in which the field for use for discriminating comprises the fifth octet of the cells.
- 15. The communications system of Claim 14 in which the fifth octet of the AAL mini-cell comprises a channel identification (CID) field.
- 16. The communications system of Claim 1 in which the bus comprises lines for carrying address signals for selecting a device from the plurality of higher layer devices.
- 17. The communications system of Claim 1 comprising a plurality of common devices in which the bus comprises lines for carrying address signals for selecting a device from the plurality of common devices
- 18. A method for the communication of data traffic via a bus between a common device and a plurality of higher layer devices; in which the bus comprises lines for carrying data and control signals; in which the data traffic comprises data in ATM form and data in AAL2

form; the method comprising the step of discriminating between the two forms of data traffic.

- 19. A method for the communication of data traffic via a bus between one or more common devices and a plurality of higher layer devices; in which the bus comprises lines for carrying data, control and address signals; in which the address signals are for selecting a device from more than one common device or from the plurality of higher layer devices; in which the data traffic comprises data in ATM form and data in AAL2 form; the method comprising the step of discriminating between the two forms of data traffic.
- 20. The method of any one of Claims 8 and 19 in which the data in AAL2 form comprises an AAL2 mini-cell associated with a means of identification of the source or destination of the mini-cell.
- 21. A method of Claim 20 in which the means of identification comprises an ATM header.
- 22. The method of Claim 21 in which the means of identification comprises a VCI field and/or a VPI field.
- 23. The method of Claim 20 in which the means of identification comprises a PCM circuit identifier.
- 24. The method of Claim 20 in which the means of identification comprises the identity of a SDH virtual container.

- 25. The method of any one of Claims 18 and 19 in which the or each common device comprises an ATM physical layer (PHY) and the plurality of higher layer devices comprise an ATM layer and an AAL2 layer.
- 26. The method of any one of Claims 18 and 19 comprising the step of using a control signal of the bus for discriminating between the two forms of data traffic.
- 27. The method of Claim 26 in which the control signal is the start of cell (SOC) signal.
- 28. The method of Claim 27 comprising the steps of monitoring the SOC signal and discriminating between the two forms of data on the basis of the number of clock cycles the SOC signal is active.
- 29. The method of Claim 26 in which the control signal is an additional signal.
- 30. The method of any one of Claims 18 and 19 comprising the step of using a field of the data traffic for discriminating between the two forms of data traffic.
- 31. The method of Claim 30 in which the data traffic comprises a UDF in which the field for use for discriminating is the UDF.
- 32. The method of Claim 30 in which the data in AAL2 form comprises an AAL2 mini-cell and in which the data in ATM form comprises an ATM cell, the method comprising the

step of using the fifth octet of the cells for discriminating.

- 33. The method of Claim 30 in which the field for use for discriminating is the VCI field and/or the VPI field.
- 34. The method of Claim 30 in which the data traffic comprises a PCM field in which the field for use for discriminating is the PCM field.

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